



# SEQUENCE LISTING

<110> COUGHLIN, Shaun R.  
ISHIHARA, Hiroaki  
CONNOLLY, Andrew

<120> PROTEASE-ACTIVATED RECEPTOR 3 AND USES  
THEREOF

<130> 220002060310

<140> US 09/208,629

<141> 1998-12-08

<150> US 08/742,440

<151> 1996-10-30

<160> 25

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1224

<212> DNA

<213> Mus Musculus

<400> 1

```
tgactttgta tacttaacaa catcctgtag ccgggtctca ggacatcaag atgaaaatcc 60
ttatcttggg tgcagctggg ctgctgtttc tgccagtcac tgtttgccaa agtggcataa 120
atgtttcaga caactcagca aagccaacct taactattaa gagttttaat ggggggtcccc 180
aaaatacctt tgaagaattc ccactttctg acatagaggg ctggacagga gccaccacaa 240
ctataaaagc ggagtgtccc gaggacagta tttcaactct ccacgtgaat aatgctacca 300
taggatacct gagaagttcc ttaagtacct aagtgatacc tgccatctat atcctgctgt 360
ttgtgggttg tgtaccatcc aacatcgtga ccctgtggaa actctcctta aggaccaa 420
ccatcagctc ggtcatcttt cacaccaacc tggccatcgc agatctcctt ttctgtgtca 480
cactgccatt taagatcgcc taccatctca atggcaacaa ctgggtatct ggcgaggtca 540
tgtgccggat caccacggtc gttttctacg gcaacatgta ctgcgctatc ctgatcctca 600
cttgcattgg catcaaccgc tacctggcca cggtcaccc ttccacatac cagaagctgc 660
ccaaacgcag cttctccttg ctcatgtgtg gcatagtgtg ggtcatgggt ttcttataca 720
tgctgccctt tgtcatcctg aagcaggagt accacctcgt ccactcagag atcaccacct 780
gccacgatgt cgtcgacgcg tgcgagtcct catcatcctt ccgattctac tacttcgtct 840
ccttagcatt ctttgggttc ctcatcccg tttgtgatcat catcttctgt tacacgactc 900
tcatccacaa acttaaatca aaggatcgga tatggctggg ctacatcaag gccgtcctcc 960
tcatccttgt gattttcaca atttgctttg cccccacaa catcactc gtaatccacc 1020
atgccaaact ctactaccac aataccgaca gcttgactt tatgtatctt attgctctgt 1080
gcctggggag cctgaatagc tgcctagatc cattccttta ctttgtcatg tcgaaagtgt 1140
tagatcagct taatccttag tcggcaatgg caagaccact ttagagacca aggagagata 1200
tctgggaaga catacatgct tggc 1224
```

<210> 2

<211> 1124

<212> DNA

<213> Mus Musculus

<220>

<221> misc\_feature

<222> 22, 27, 117, 118, 119, 120, 121, 122, 123, 350, 351, 442,  
443, 444, 595, 596, 597, 663, 785, 859, 860, 861, 862, 863,  
864

<223> n = A, T, C, or G

<400> 2

```
ccatatgcta atatttcctt tcaattacag gcataaatgt ttcagacaac tcagcaaagc 60
caaccttaac tattaagagt tttaatgggg gtcccaaaaa tacctttgaa gaattcnnnn 120
nnntacaact ctccatgtga ataatgctac catgggatac ctgagaagtt ccttaagtac 180
caaagtgata cctgccatct acatcctggg gtttgtgatt ggtgtaccag cgaacatcgt 240
gaccctgtgg aaactctcct caaggaccaa atccatctgt ctggatcatct ttcacaccaa 300
cctggccatc gcggatctcc ttttctgtgt cacgctgccg tttaagatcn ncctaccatc 360
tcaatggcaa caactgggta tttggcgagg tcatgtgccg gatcaccacg gtcgttttct 420
acggcaacat gtactgcgct annntcctga tcctcacctg catgggcatc aaccgctacc 480
tgccacggc tcaccctttc acataccaga agctgcccaa acgcagcttc tccatgctca 540
tgtgtggcat ggtgtgggtc atggttttct tatacatgct gccctttgtc atccnnnaag 600
caggagtacc acctcgcca ctccgagatc accacctgcc acgatgtcgt cgacgcgtgc 660
gantcccat catccttccg attctactac ttcgtctcct tagcattctt tgggttcctc 720
atcccgtttg tgatcatcat cttctgttac acgactctca tccacaaact taaatcaaaa 780
gatcngatat ggctgggcta catcaaggcc gtcctcctca tccttgtgaa tttcaccatc 840
tgcttcccc ccaccaagnn nnnngatctc tggaagacg tacatgcttg gctgacttgt 900
gcatggcacc atcagctcaa tttttaattt ttttaattta atttaattta attttatgtt 960
tttgagacag agcctcactg tgtagtcttg gctggcctgg ctggttctct atttagacca 1020
ggttagcctt gaactcacag agatctgcct gcttctgcct cccaagtgtc gggttcaacc 1080
aggtctggca agcgtccat ttttcagctc ctctgcaaca gtgc 1124
```

<210> 3

<211> 369

<212> PRT

<213> Mus Musculus

<400> 3

```
Met Lys Ile Leu Ile Leu Val Ala Ala Gly Leu Leu Phe Leu Pro Val
 1          5          10          15
Thr Val Cys Gln Ser Gly Ile Asn Val Ser Asp Asn Ser Ala Lys Pro
 20          25          30
Thr Leu Thr Ile Lys Ser Phe Asn Gly Gly Pro Gln Asn Thr Phe Glu
 35          40          45
Glu Phe Pro Leu Ser Asp Ile Glu Gly Trp Thr Gly Ala Thr Thr Thr
 50          55          60
Ile Lys Ala Glu Cys Pro Glu Asp Ser Ile Ser Thr Leu His Val Asn
 65          70          75          80
Asn Ala Thr Ile Gly Tyr Leu Arg Ser Ser Leu Ser Thr Gln Val Ile
 85          90          95
Pro Ala Ile Tyr Ile Leu Leu Phe Val Val Gly Val Pro Ser Asn Ile
 100         105         110
Val Thr Leu Trp Lys Leu Ser Leu Arg Thr Lys Ser Ile Ser Leu Val
 115         120         125
Ile Phe His Thr Asn Leu Ala Ile Ala Asp Leu Leu Phe Cys Val Thr
 130         135         140
Leu Pro Phe Lys Ile Ala Tyr His Leu Asn Gly Asn Asn Trp Val Phe
 145         150         155         160
Gly Glu Val Met Cys Arg Ile Thr Thr Val Val Phe Tyr Gly Asn Met
 165         170         175
Tyr Cys Ala Ile Leu Ile Leu Thr Cys Met Gly Ile Asn Arg Tyr Leu
 180         185         190
Ala Thr Ala His Pro Phe Thr Tyr Gln Lys Leu Pro Lys Arg Ser Phe
```

	195		200		205										
Ser	Leu	Leu	Met	Cys	Gly	Ile	Val	Trp	Val	Met	Val	Phe	Leu	Tyr	Met
	210					215					220				
Leu	Pro	Phe	Val	Ile	Leu	Lys	Gln	Glu	Tyr	His	Leu	Val	His	Ser	Glu
225					230					235					240
Ile	Thr	Thr	Cys	His	Asp	Val	Val	Asp	Ala	Cys	Glu	Ser	Pro	Ser	Ser
			245						250					255	
Phe	Arg	Phe	Tyr	Phe	Val	Ser	Leu	Ala	Phe	Phe	Gly	Phe	Leu	Ile	
			260				265					270			
Pro	Phe	Val	Ile	Ile	Ile	Phe	Cys	Tyr	Thr	Thr	Leu	Ile	His	Lys	Leu
		275				280					285				
Lys	Ser	Lys	Asp	Arg	Ile	Trp	Leu	Gly	Tyr	Ile	Lys	Ala	Val	Leu	Leu
	290				295						300				
Ile	Leu	Val	Ile	Phe	Thr	Ile	Cys	Phe	Ala	Pro	Thr	Asn	Ile	Ile	Leu
305					310					315					320
Val	Ile	His	His	Ala	Asn	Tyr	Tyr	Tyr	His	Asn	Thr	Asp	Ser	Leu	Tyr
			325						330					335	
Phe	Met	Tyr	Leu	Ile	Ala	Leu	Cys	Leu	Gly	Ser	Leu	Asn	Ser	Cys	Leu
		340				345					350				
Asp	Pro	Phe	Leu	Tyr	Phe	Val	Met	Ser	Lys	Val	Val	Asp	Gln	Leu	Asn
	355					360					365				
Pro															

<210> 4  
 <211> 1224  
 <212> DNA  
 <213> Homo Sapiens

<400> 4  
 tgctccatga ttttacagat ttcataacgt ttaagagacg ggactcaggt catcaaaatg 60  
 aaagccctca tctttgcagc tgctggcctc ctgcttctgt tgcccacttt ttgtcagagt 120  
 ggcattgaaa atgatacaaa caacttggca aagccaacct taccatttaa gacctttcgt 180  
 ggagctcccc caaattcttt tgaagagttc cctttttctg ccttgggaagg ctggacagga 240  
 gccacgatta ctgtaaaaaat taagtgcctt gaagaaagtg cttcacatct ccatgtgaaa 300  
 aatgctacca tggggtacct gaccagctcc ttaagtacta aactgatacc tgccatctac 360  
 ctctgtgtgt ttgtagttgg tgtcccgccc aatgctgtga ccctgtggat gctttttctt 420  
 aggaccagat ccatctgtac cactgtattc tacaccaacc tggccattgc agattttctt 480  
 ttttgtgtta cattgccctt taagatagct tatcatctca atgggaacaa ctgggtattt 540  
 ggagaggtcc tgtgccgggc caccacagtc atcttctatg gcaacatgta ctgctccatt 600  
 ctgctccttg cctgcatcag catcaaccgc tacctggcca tcgtccatcc tttcacctac 660  
 cggggcctgc ccaagcacac ctatgccttg gtaacatgtg gactgggtgtg ggcaacagtt 720  
 ttcttatata tgctgccatt tttcatactg aagcaggaat attatcttgt tcagccagac 780  
 atcaccacct gccatgatgt tcacaacact tgcgagtcct catctccctt ccaactctat 840  
 tacttcatct ccttggcatt ctttggattc ttaattccat ttgtgcttat catctactgc 900  
 tatgcagcca tcatccggac acttaatgca tacgatcata gatgggtgtg gtatgttaag 960  
 gcgagtctcc tcatccttgt gattttttacc atttgctttg ctccaagcaa tattattctt 1020  
 attattcacc atgctaacta ctactacaac aacactgatg gcttatattt tatatatctc 1080  
 atagctttgt gcctgggtag tcttaatagt tgcttagatc cattccttta ttttctcatg 1140  
 tcaaaaacca gaaatcactc cactgcttac cttacaaaat agtgaaatga tcttagagaa 1200  
 caaggacagc catcacagag aacg 1224

<210> 5  
 <211> 1102  
 <212> DNA  
 <213> Homo Sapiens

<400> 5

```

acaggcatgg aaaatgatac aaacaacttg gcaaagccaa ccttacccat taagaccttt 60
cgtggagctc ccccaaattc ttttgaagag ttcccccttt ctgccttgga aggctggaca 120
ggagccacga ttactgtaaa aattaagtgc cctgaagaaa gtgcttcaca tctccatgtg 180
aaaaatgcta ccatggggta cctgaccagc tccttaagta ctaaactgat acctgccatc 240
tacctcctgg tgtttgtagt tgggtgtccc gccaatgctg tgaccctgtg gatgcttttc 300
ttcaggacca gatccatctg taccactgta ttctacacca acctggccat tgcagatttt 360
cttttttgtg ttacattgcc ctttaagata gcttatcatc tcaatgggaa caactgggta 420
tttggagagg tcctgtgccc ggccaccaca gtcattcttct atggcaacat gtactgctcc 480
attctgctcc ttgcctgcat cagcatcaac cgctacctgg ccatcgtcca tcctttcacc 540
taccggggcc tgcccaagca cacctatgcc ttggtaacat gtggactggg gtgggcaaca 600
gttttcttat atatgctgcc atttttcata ctgaagcagg aatattatct tgttcagcca 660
gacatcacca cctgccatga tgttcacaac acttgcgagt cctcatctcc cttccaactc 720
tattacttca tctccttggc attccttgga ttcttaattc catttggtgt tatcatctac 780
tgctatgcag ccatcatccg gacacttaat gcatacgatc atagatgggt gtggtatggt 840
aaggcgagtc tcctcatcct tgtgattttt accatttgct ttgctccaag caatattatt 900
cttattattc accatgctaa ctactactac aacaacactg atggcttata ttttatatat 960
ctcatagctt tgtgcctggg tagtcttaat agttgcttag atccattcct ttattttctc 1020
atgtcaaaaa ccagaaatca ctccactgct taccttacia aatagtgaag tgatcttaga 1080
gaacaaggac agccatcaca ga 1102

```

<210> 6

<211> 374

<212> PRT

<213> Homo Sapiens

<400> 6

```

Met Lys Ala Leu Ile Phe Ala Ala Ala Gly Leu Leu Leu Leu Leu Pro
 1           5           10           15
Thr Phe Cys Gln Ser Gly Met Glu Asn Asp Thr Asn Asn Leu Ala Lys
 20           25           30
Pro Thr Leu Pro Ile Lys Thr Phe Arg Gly Ala Pro Pro Asn Ser Phe
 35           40           45
Glu Glu Phe Pro Phe Ser Ala Leu Glu Gly Trp Thr Gly Ala Thr Ile
 50           55           60
Thr Val Lys Ile Lys Cys Pro Glu Glu Ser Ala Ser His Leu His Val
 65           70           75           80
Lys Asn Ala Thr Met Gly Tyr Leu Thr Ser Ser Leu Ser Thr Lys Leu
 85           90           95
Ile Pro Ala Ile Tyr Leu Leu Val Phe Val Val Gly Val Pro Ala Asn
100           105           110
Ala Val Thr Leu Trp Met Leu Phe Arg Thr Arg Ser Ile Cys Thr
115           120           125
Thr Val Phe Tyr Thr Asn Leu Ala Ile Ala Asp Phe Leu Phe Cys Val
130           135           140
Thr Leu Pro Phe Lys Ile Ala Tyr His Leu Asn Gly Asn Asn Trp Val
145           150           155           160
Phe Gly Glu Val Leu Cys Arg Ala Thr Thr Val Ile Phe Tyr Gly Asn
165           170           175
Met Tyr Cys Ser Ile Leu Leu Leu Ala Cys Ile Ser Ile Asn Arg Tyr
180           185           190
Leu Ala Ile Val His Pro Phe Thr Tyr Arg Gly Leu Pro Lys His Thr
195           200           205
Tyr Ala Leu Val Thr Cys Gly Leu Val Trp Ala Thr Val Phe Leu Tyr
210           215           220
Met Leu Pro Phe Phe Ile Leu Lys Gln Glu Tyr Tyr Leu Val Gln Pro

```

225		230		235		240									
Asp	Ile	Thr	Thr	Cys	His	Asp	Val	His	Asn	Thr	Cys	Glu	Ser	Ser	Ser
				245					250					255	
Pro	Phe	Gln	Leu	Tyr	Tyr	Phe	Ile	Ser	Leu	Ala	Phe	Phe	Gly	Phe	Leu
			260					265					270		
Ile	Pro	Phe	Val	Leu	Ile	Ile	Tyr	Cys	Tyr	Ala	Ala	Ile	Ile	Arg	Thr
		275					280					285			
Leu	Asn	Ala	Tyr	Asp	His	Arg	Trp	Leu	Trp	Tyr	Val	Lys	Ala	Ser	Leu
	290					295					300				
Leu	Ile	Leu	Val	Ile	Phe	Thr	Ile	Cys	Phe	Ala	Pro	Ser	Asn	Ile	Ile
305					310					315					320
Leu	Ile	Ile	His	His	Ala	Asn	Tyr	Tyr	Tyr	Asn	Asn	Thr	Asp	Gly	Leu
			325					330					335		
Tyr	Phe	Ile	Tyr	Leu	Ile	Ala	Leu	Cys	Leu	Gly	Ser	Leu	Asn	Ser	Cys
		340					345			350					
Leu	Asp	Pro	Phe	Leu	Tyr	Phe	Leu	Met	Ser	Lys	Thr	Arg	Asn	His	Ser
	355					360				365					
Thr	Ala	Tyr	Leu	Thr	Lys										
370															

<210> 7  
 <211> 425  
 <212> PRT  
 <213> Homo Sapiens

<400> 7
Met Gly Pro Arg Arg Leu Leu Leu Val Ala Ala Cys Phe Ser Leu Cys
1 5 10 15
Gly Pro Leu Leu Ser Ala Arg Thr Arg Ala Arg Arg Pro Glu Ser Lys
20 25 30
Ala Thr Asn Ala Thr Leu Asp Pro Arg Ser Phe Leu Leu Arg Asn Pro
35 40 45
Asn Asp Lys Tyr Glu Pro Phe Trp Glu Asp Glu Glu Lys Asn Glu Ser
50 55 60
Gly Leu Thr Glu Tyr Arg Leu Val Ser Ile Asn Lys Ser Ser Pro Leu
65 70 75 80
Gln Lys Gln Leu Pro Ala Phe Ile Ser Glu Asp Ala Ser Gly Tyr Leu
85 90 95
Thr Ser Ser Trp Leu Thr Leu Phe Val Pro Ser Val Tyr Thr Gly Val
100 105 110
Phe Val Val Ser Leu Pro Leu Asn Ile Met Ala Ile Val Val Phe Ile
115 120 125
Leu Lys Met Lys Val Lys Lys Pro Ala Val Val Tyr Met Leu His Leu
130 135 140
Ala Thr Ala Asp Val Leu Phe Val Ser Val Leu Pro Phe Lys Ile Ser
145 150 155 160
Tyr Tyr Phe Ser Gly Ser Asp Trp Gln Phe Gly Ser Glu Leu Cys Arg
165 170 175
Phe Val Thr Ala Ala Phe Tyr Cys Asn Met Tyr Ala Ser Ile Leu Leu
180 185 190
Met Thr Val Ile Ser Ile Asp Arg Phe Leu Ala Val Val Tyr Pro Met
195 200 205
Gln Ser Leu Ser Trp Arg Thr Leu Gly Arg Ala Ser Phe Thr Cys Leu
210 215 220
Ala Ile Trp Ala Leu Ala Ile Ala Gly Val Val Pro Leu Val Leu Lys
225 230 235 240

Glu	Gln	Thr	Ile	Gln	Val	Pro	Gly	Leu	Asn	Ile	Thr	Thr	Cys	His	Asp	
				245					250					255		
Val	Leu	Asn	Glu	Thr	Leu	Leu	Glu	Gly	Tyr	Tyr	Ala	Tyr	Tyr	Phe	Ser	
			260					265						270		
Ala	Phe	Ser	Ala	Val	Phe	Phe	Phe	Val	Pro	Leu	Ile	Ile	Ser	Thr	Val	
			275					280					285			
Cys	Tyr	Val	Ser	Ile	Ile	Arg	Cys	Leu	Ser	Ser	Ser	Ala	Val	Ala	Asn	
			290				295					300				
Arg	Ser	Lys	Lys	Ser	Arg	Ala	Leu	Phe	Leu	Ser	Ala	Ala	Val	Phe	Cys	
					310					315					320	
Ile	Phe	Ile	Ile	Cys	Phe	Gly	Pro	Thr	Asn	Val	Leu	Leu	Ile	Ala	His	
				325					330					335		
Tyr	Ser	Phe	Leu	Ser	His	Thr	Ser	Thr	Thr	Glu	Ala	Ala	Tyr	Phe	Ala	
			340					345					350			
Tyr	Leu	Leu	Cys	Val	Cys	Val	Ser	Ser	Ile	Ser	Ser	Cys	Ile	Asp	Pro	
			355				360					365				
Leu	Ile	Tyr	Tyr	Tyr	Ala	Ser	Ser	Glu	Cys	Gln	Arg	Tyr	Val	Tyr	Ser	
			370				375				380					
Ile	Leu	Cys	Cys	Lys	Glu	Ser	Ser	Asp	Pro	Ser	Ser	Tyr	Asn	Ser	Ser	
					390					395					400	
Gly	Gln	Leu	Met	Ala	Ser	Lys	Met	Asp	Thr	Cys	Ser	Ser	Asn	Leu	Asn	
				405				410					415			
Asn	Ser	Ile	Tyr	Lys	Lys	Leu	Leu	Thr								
			420					425								

<210> 8

<211> 394

<212> PRT

<213> Homo Sapiens

<400> 8

Met	Arg	Ser	Pro	Ser	Ala	Ala	Trp	Leu	Leu	Gly	Ala	Ala	Ile	Leu	Leu	
1				5				10					15			
Ala	Ala	Ser	Leu	Ser	Cys	Ser	Gly	Thr	Ile	Gln	Gly	Thr	Asn	Arg	Ser	
			20					25					30			
Ser	Lys	Gly	Arg	Ser	Leu	Ile	Gly	Lys	Val	Asp	Gly	Thr	Ser	His	Val	
			35				40					45				
Thr	Gly	Lys	Gly	Val	Thr	Val	Glu	Thr	Val	Phe	Ser	Val	Asp	Glu	Phe	
			50			55				60						
Ser	Ala	Ser	Val	Leu	Thr	Gly	Lys	Leu	Thr	Thr	Val	Phe	Leu	Pro	Ile	
					70					75				80		
Val	Tyr	Thr	Ile	Val	Phe	Val	Val	Gly	Leu	Pro	Ser	Asn	Gly	Met	Ala	
				85				90					95			
Leu	Trp	Val	Phe	Leu	Phe	Arg	Thr	Lys	Lys	His	Pro	Ala	Val	Ile		
			100					105				110				
Tyr	Met	Ala	Asn	Leu	Ala	Leu	Ala	Asp	Leu	Leu	Ser	Val	Ile	Trp	Phe	
			115				120					125				
Pro	Leu	Lys	Ile	Ala	Tyr	His	Ile	His	Gly	Asn	Asn	Trp	Ile	Tyr	Gly	
			130			135				140						
Glu	Ala	Leu	Cys	Asn	Val	Leu	Ile	Gly	Phe	Phe	Tyr	Gly	Asn	Met	Tyr	
				150					155					160		
Cys	Ser	Ile	Leu	Phe	Met	Thr	Cys	Leu	Ser	Val	Gln	Arg	Tyr	Trp	Val	
				165				170				175				
Ile	Val	Asn	Pro	Met	Gly	His	Ser	Arg	Lys	Lys	Ala	Asn	Ile	Ala	Ile	
			180					185				190				
Gly	Ile	Ser	Leu	Ala	Ile	Trp	Leu	Leu	Ile	Leu	Leu	Val	Thr	Ile	Pro	



<211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Construct  
  
 <221> misc\_feature  
 <222> 6, 9, 12, 15, 21  
 <223> n = Inosine  
  
 <221> misc\_feature  
 <222> 24  
 <223> n = A, C, G, or T  
  
 <400> 11  
 ggatanacna cngcnadrwa nckntc

26

<210> 12  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Construct  
  
 <400> 12  
 Asp Tyr Lys Asp Asp Asp  
 1 5

<210> 13  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Construct

<400> 13  
 Met Asp Ser Lys Gly Ser Ser Gln Lys Gly Ser Arg Leu Leu Leu Leu  
 1 5 10 15  
 Leu Val Val Ser Asn Leu Leu Leu Cys Gln Gly Val Val Ser Asp Tyr  
 20 25 30  
 Lys Asp Asp Asp Asp Val Glu  
 35

<210> 14  
 <211> 5  
 <212> PRT  
 <213> Homo Sapiens  
  
 <400> 14  
 Phe Glu Glu Phe Pro  
 1 5



<210> 15  
<211> 5  
<212> PRT  
<213> Homo Sapiens

<400> 15  
Phe Glu Glu Ile Pro  
1 5

<210> 16  
<211> 5  
<212> PRT  
<213> Homo Sapiens

<400> 16  
Tyr Glu Pro Phe Trp  
1 5

<210> 17  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 17  
Thr Phe Arg Gly Ala Pro Pro Asn Ser  
1 5

<210> 18  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Construct

<400> 18  
Val Glu His His His His His His  
1 5

<210> 19  
<211> 23  
<212> PRT  
<213> Homo Sapiens

<400> 19  
Leu Pro Ile Lys Thr Phe Arg Gly Ala Pro Pro Asn Ser Phe Glu Glu  
1 5 10 15  
Phe Pro Phe Ser Ala Leu Glu  
20

<210> 20

<211> 22  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Construct

<400> 20  
Leu Pro Ile Lys Pro Phe Arg Gly Ala Pro Pro Asn Ser Phe Glu Glu  
1 5 10 15  
Phe Pro Phe Ala Leu Glu  
20

<210> 21  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Construct

<221> VARIANT  
<222> 1  
<223> Xaa = beta-homoarginine

<400> 21  
Xaa Thr Phe Arg Gly Ala Pro Pro Asn Ser Phe Glu Glu Phe Pro Phe  
1 5 10 15  
Ser Ala Leu Glu  
20

<210> 22  
<211> 22  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Construct

<221> VARIANT  
<222> 1  
<223> Xaa = D-phenylalanine

<400> 22  
Xaa Pro Arg Pro Phe Arg Gly Ala Pro Pro Asn Ser Phe Glu Glu Phe  
1 5 10 15  
Pro Phe Ser Ala Leu Glu  
20

<210> 23  
<211> 4  
<212> PRT  
<213> Homo Sapiens

<400> 23

Leu Pro Ile Lys

1

<210> 24

<211> 404

<212> PRT

<213> Mus Musculus

<400> 24

Thr	Leu	Tyr	Thr	Gln	His	Pro	Val	Ala	Gly	Ser	Gln	Asp	Ile	Lys	Met
1				5					10					15	
Lys	Ile	Leu	Ile	Leu	Val	Ala	Ala	Gly	Leu	Leu	Phe	Leu	Pro	Val	Thr
			20					25					30		
Val	Cys	Gln	Ser	Gly	Ile	Asn	Val	Ser	Asp	Asn	Ser	Ala	Lys	Pro	Thr
		35					40					45			
Leu	Thr	Ile	Lys	Ser	Phe	Asn	Gly	Gly	Pro	Gln	Asn	Thr	Phe	Glu	Glu
	50					55					60				
Phe	Pro	Leu	Ser	Asp	Ile	Glu	Gly	Trp	Thr	Gly	Ala	Thr	Thr	Thr	Ile
65					70					75					80
Lys	Ala	Glu	Cys	Pro	Glu	Asp	Ser	Ile	Ser	Thr	Leu	His	Val	Asn	Asn
				85					90					95	
Ala	Thr	Ile	Gly	Tyr	Leu	Arg	Ser	Ser	Leu	Ser	Thr	Gln	Val	Ile	Pro
			100					105					110		
Ala	Ile	Tyr	Ile	Leu	Leu	Phe	Val	Val	Gly	Val	Pro	Ser	Asn	Ile	Val
		115					120					125			
Thr	Leu	Trp	Lys	Leu	Ser	Leu	Arg	Thr	Lys	Ser	Ile	Ser	Leu	Val	Ile
	130					135					140				
Phe	His	Thr	Asn	Leu	Ala	Ile	Ala	Asp	Leu	Leu	Phe	Cys	Val	Thr	Leu
145				150						155					160
Pro	Phe	Lys	Ile	Ala	Tyr	His	Leu	Asn	Gly	Asn	Asn	Trp	Val	Phe	Gly
				165					170					175	
Glu	Val	Met	Cys	Arg	Ile	Thr	Thr	Val	Val	Phe	Tyr	Gly	Asn	Met	Tyr
			180					185				190			
Cys	Ala	Ile	Leu	Ile	Leu	Thr	Cys	Met	Gly	Ile	Asn	Arg	Tyr	Leu	Ala
		195					200					205			
Thr	Ala	His	Pro	Phe	Thr	Tyr	Gln	Lys	Leu	Pro	Lys	Arg	Ser	Phe	Ser
	210					215					220				
Leu	Leu	Met	Cys	Gly	Ile	Val	Trp	Val	Met	Val	Phe	Leu	Tyr	Met	Leu
225					230					235					240
Pro	Phe	Val	Ile	Leu	Lys	Gln	Glu	Tyr	His	Leu	Val	His	Ser	Glu	Ile
				245					250					255	
Thr	Thr	Cys	His	Asp	Val	Val	Asp	Ala	Cys	Glu	Ser	Pro	Ser	Ser	Phe
		260						265					270		
Arg	Phe	Tyr	Tyr	Phe	Val	Ser	Leu	Ala	Phe	Phe	Gly	Phe	Leu	Ile	Pro
		275					280					285			
Phe	Val	Ile	Ile	Ile	Phe	Cys	Tyr	Thr	Thr	Leu	Ile	His	Lys	Leu	Lys
	290					295					300				
Ser	Lys	Asp	Arg	Ile	Trp	Leu	Gly	Tyr	Ile	Lys	Ala	Val	Leu	Leu	Ile
305					310					315					320
Leu	Val	Ile	Phe	Thr	Ile	Cys	Phe	Ala	Pro	Thr	Asn	Ile	Ile	Leu	Val
				325					330					335	
Ile	His	His	Ala	Asn	Tyr	Tyr	Tyr	His	Asn	Thr	Asp	Ser	Leu	Tyr	Phe
			340					345					350		
Met	Tyr	Leu	Ile	Ala	Leu	Cys	Leu	Gly	Ser	Leu	Asn	Ser	Cys	Leu	Asp
		355					360					365			
Pro	Phe	Leu	Tyr	Phe	Val	Met	Ser	Lys	Val	Val	Asp	Gln	Leu	Asn	Pro

370	375	380
Ser Ala Met Ala Arg Pro Leu Arg Pro Arg Arg Asp Ile Trp Glu Asp		
385	390	395
Ile His Ala Trp		400

<210> 25  
 <211> 405  
 <212> PRT  
 <213> Homo Sapiens

<400> 25

Cys Ser Met Ile Leu Gln Ile Ser Arg Leu Arg Asp Gly Thr Gln Val		
1	5	10
Ile Lys Met Lys Ala Leu Ile Phe Ala Ala Ala Gly Leu Leu Leu Leu		15
	20	25
Leu Pro Thr Phe Cys Gln Ser Gly Met Glu Asn Asp Thr Asn Asn Leu		30
	35	40
Ala Lys Pro Thr Leu Pro Ile Lys Thr Phe Arg Gly Ala Pro Pro Asn		45
	50	55
Ser Phe Glu Glu Phe Pro Phe Ser Ala Leu Glu Gly Trp Thr Gly Ala		60
65	70	75
Thr Ile Thr Val Lys Ile Lys Cys Pro Glu Glu Ser Ala Ser His Leu		80
	85	90
His Val Lys Asn Ala Thr Met Gly Tyr Leu Thr Ser Ser Leu Ser Thr		95
	100	105
Lys Leu Ile Pro Ala Ile Tyr Leu Leu Val Phe Val Val Gly Val Pro		110
	115	120
Ala Asn Ala Val Thr Leu Trp Met Leu Phe Phe Arg Thr Arg Ser Ile		125
	130	135
Cys Thr Thr Val Phe Tyr Thr Asn Leu Ala Ile Ala Asp Phe Leu Phe		140
145	150	155
Cys Val Thr Leu Pro Phe Lys Ile Ala Tyr His Leu Asn Gly Asn Asn		160
	165	170
Trp Val Phe Gly Glu Val Leu Cys Arg Ala Thr Thr Val Ile Phe Tyr		175
	180	185
Gly Asn Met Tyr Cys Ser Ile Leu Leu Leu Ala Cys Ile Ser Ile Asn		190
	195	200
Arg Tyr Leu Ala Ile Val His Pro Phe Thr Tyr Arg Gly Leu Pro Lys		205
	210	215
His Thr Tyr Ala Leu Val Thr Cys Gly Leu Val Trp Ala Thr Val Phe		220
225	230	235
Leu Tyr Met Leu Pro Phe Phe Ile Leu Lys Gln Glu Tyr Tyr Leu Val		240
	245	250
Gln Pro Asp Ile Thr Thr Cys His Asp Val His Asn Thr Cys Glu Ser		255
	260	265
Ser Ser Pro Phe Gln Leu Tyr Tyr Phe Ile Ser Leu Ala Phe Phe Gly		270
	275	280
Phe Leu Ile Pro Phe Val Leu Ile Ile Tyr Cys Tyr Ala Ala Ile Ile		285
	290	295
Arg Thr Leu Asn Ala Tyr Asp His Arg Trp Leu Trp Tyr Val Lys Ala		300
305	310	315
Ser Leu Leu Ile Leu Val Ile Phe Thr Ile Cys Phe Ala Pro Ser Asn		320
	325	330
Ile Ile Leu Ile Ile His His Ala Asn Tyr Tyr Tyr Asn Asn Thr Asp		335
	340	345
		350

Gly	Leu	Tyr	Phe	Ile	Tyr	Leu	Ile	Ala	Leu	Cys	Leu	Gly	Ser	Leu	Asn
		355					360					365			
Ser	Cys	Leu	Asp	Pro	Phe	Leu	Tyr	Phe	Leu	Met	Ser	Lys	Thr	Arg	Asn
	370					375					380				
His	Ser	Thr	Ala	Tyr	Leu	Thr	Lys	Asn	Asp	Leu	Arg	Glu	Gln	Gly	Gln
385					390					395					400
Pro	Ser	Gln	Arg	Thr											
				405											